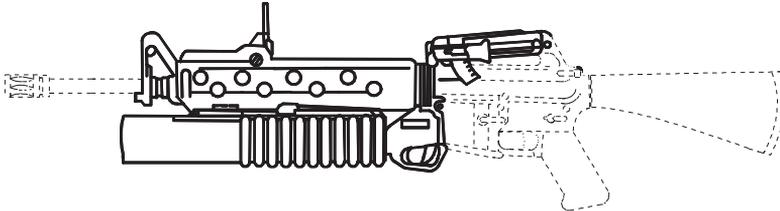


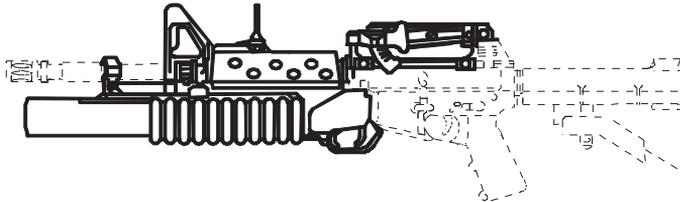
ARMY *TM 9-1010-221-10
AIR FORCE TO 11W3-9-4-1
MARINE CORPS TM 07700A-10/1A
NAVY SW370-AE-OPI-010

**OPERATOR'S MANUAL
FOR:**

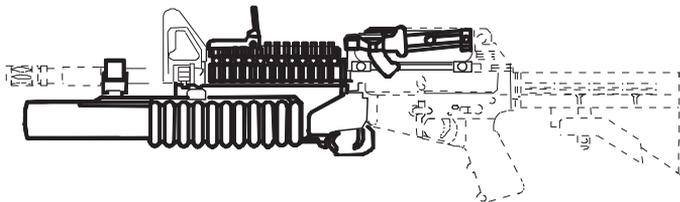
**LAUNCHER, GRENADE, 40-MM, M203 W/E
(NSN 1010-00-179-6447) (EIC 4QB)**



**LAUNCHER, GRENADE, 40-MM, M203A1 W/E
(NSN 1010-01-434-9028) (EIC 4QH)**



**LAUNCHER, GRENADE, 40-MM, M203A2 W/E
(NSN 1010-01-495-8511) (EIC 4QJ)**



* This manual supersedes TM 9-1010-221-10 dated August 1, 2001 including all changes

**HEADQUARTERS, DEPARTMENTS OF THE ARMY,
AIR FORCE, NAVY, AND HEADQUARTERS,
US MARINE CORPS**

31 October 2011

PCN 184 07701 00

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WARNING SUMMARY

This warning summary contains general safety warning and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel. Also included are explanations of safety and hazardous materials icons used within the Technical Manual.

FIRST AID

For first aid information, refer to FM 4-25.11, First Aid
Air Force Personnel, refer to AFMAN 44-163 (I) First Aid

EXPLANATION OF SAFETY WARNING ICONS



WEAPON FIRE - accidental discharge of a weapon could penetrate the body causing serious injury or death.



EXPLOSION - rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.



EAR PROTECTION - headphones over ears shows that noise level will harm ears.

WARNING SUMMARY-(CONTINUED)

GENERAL SAFETY WARNINGS DESCRIPTION



Noise from firing weapon can permanently damage hearing. Hearing protection is required for all personnel within 20 meters of a weapon firing any type ammunition. Exposed personnel should participate in a hearing conservation program in accordance with DA PAM 385-10 and DA PAM 40-501.



Ammunition can explode when mishandled or exposed to heat. Handle ammunition in accordance with AR 385-10 and AR 385-64. Keep ammunition away from electrical sparks and high heat. Do not use or handle damaged ammunition. Do not fire unauthorized ammunition not made for use in the M203 Grenade Launcher. This may result in injury or death of operator.



Grenade launcher may accidentally fire. Ensure weapon is clear before loading weapon or performing Preventative Maintenance Checks and Services (PMCS). Noncompliance may result in injury or death to operator.



Improper target acquisition could result in hazardous fragmentation back on crew or fratricide of friendly forces. Weapon fire control must comply with published surface danger zones (SDZ) in accordance with AR 385-63. Ensure there are no obstacles in the line of fire.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: Zero in the “Change No.” column indicates an original page or work package.

Date of issue for original manual is: 31 October 2011

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 14 AND TOTAL NUMBER OF WORK PACKAGES IS 16 CONSISTING OF THE FOLLOWING:

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WP 0016 (2 pgs)	0
Index (2 pgs)	0

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**ARMY *TM 9-1010-221-10
AIR FORCE TO 11W3-9-4-1
MARINE CORPS TM 07700A-10/1A
NAVY SW370-AE-OPI-010**

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AIR FORCE, NAVY, and
HEADQUARTERS, US MARINE CORPS
WASHINGTON, D.C., 31 OCTOBER 2011

OPERATOR'S MANUAL

FOR

**LAUNCHER, GRENADE, 40-MM, M203 W/E
(NSN 1010-00-179-6447) (EIC 4QB)
LAUNCHER, GRENADE, 40-MM, M203A1 W/E
(NSN 1010-01-434-9028) (EIC 4QH)
LAUNCHER, GRENADE, 40-MM, M203A2 W/E
(NSN 1010-01-495-8511) (EIC 4QJ)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know.

(a) (A) Army - The preferred method is to submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms) through the Internet on the TACOM Unique Logistics Support Applications (TULSA) website. The Internet address is <https://tulsa.tacom.army.mil>. The DA Form 2028 is located under the TULSA Applications on the left-hand navigation bar. Fill out the form and click on SUBMIT. Using this form on the TULSA website will enable us to respond more quickly to your comments and better manage the DA Form 2028 program. You may also mail, e-mail, or fax your comments or DA Form 2028 directly to the U.S. Army TACOM Life Cycle Management Command. The postal mail address is U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-MPP / TECH PUBS, 6501 E. 11 Mile Road, Warren, MI 48397-5000. The e-mail address is tacomlcmc.daform2028@us.army.mil. The fax number is DSN 786-1856 or Commercial (586) 282-1856.

(b) (MC) Marine Corps - By NAVMC form 10772 directly to Commander, Marine Corps System Command (PG-13, PM, IW), Quantico VA 22134-6050.

(c) (N) Navy - By letter directly to Commander, Naval Surface Warfare Center, Crane Division, Code 2041, Crane, In 47522-5020.

(d) (F) Air Force - By Air Force AFTO Form 22 directly to WR-ALC/LZDTA, Robins AFG, GA 31098-5609. A reply will be furnished to you.

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HOW TO USE THIS MANUAL

The safest, easiest and best way to operate the M203 series 40-mm Grenade Launcher is to use this manual. Learning to use this technical manual (TM) is as easy as reading through the next few pages of this section. Knowing what is in this manual and how to use it will save you time and work and will help you to avoid exposing yourself to unnecessary hazards while performing your job.

So where do you start?

Right here, if this is the first time you are using this TM. Ensure to completely read this section on how to use this manual first. There's a lot of information here that you need to know.

Organization

This manual covers the maintenance of M203 series 40-mm Grenade Launcher. The manual itself is divided into seven chapters. Chapters are divided into Work Packages. The seven chapters, and what they contain, are found in the Table of Contents in the front of this manual. For example, to learn about maintenance of M203 series 40-mm Grenade Launcher, you would look in the table of contents and discover that Chapter 5 provides all pertinent information about the maintenance of the weapon. Since Chapter 5 covers a great deal of information, you will have to scan the chapter to find the specific information you will need.

In the final chapter of this manual, you will find supporting information. Each work package provides specific information that will assist you in performing the various operational tasks. The work packages provide such information as References (i.e., other TMs or FMs), as in WP 0013, and Expendable/Durable Supplies and Materials, as in WP0016. Others provide information unique to the needs of the weapon. Become familiar with all supporting information before beginning any maintenance task.

Am I ready to use this TM?

If you've taken the time necessary to read this section, and are sure of the location and arrangement of the different sections of this TM, you are ready to begin. Remember, this TM has been arranged with you, the user, in mind. Your safety and ability to perform the maintenance tasks in the most efficient manner hinge on your ability to perform and understand the information contained in this manual. If you fully understand the arrangement and purpose of this TM, and have taken the time to read through this section, you will have no trouble maintaining this weapon in the manner for which it was designed.

CHAPTER 1
FOR
LAUNCHER, GRENADE, 40-MM, M203
LAUNCHER, GRENADE, 40-MM, M203A1
LAUNCHER, GRENADE, 40-MM, M203A2

GENERAL INFORMATION

SCOPE

TYPE OF MANUAL: Operator's Manual

Model Number and Equipment Name.

The M203 is used with the M16A2 Rifle.

The M203A1 is used with the M4/M4A1 Carbine.

The M203A2 is used with the M16A3/M16A4 Rifle and M4/M4A1 Carbine.

Purpose of Equipment. The purpose of the M203 series 40-mm Grenade Launcher is to provide personnel with an offensive and defensive capability to engage targets in the field. These weapons provide a lightweight, operator friendly, flexible, lethal, and reliable tool.

MAINTENANCE FORMS, RECORDS AND REPORTS

(A) Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; Functional Users Manual for the Army Maintenance Management Systems-Aviation (TAMMS-A); or AR 700-138, Army Logistics Readiness and Sustainability. Accidents involving injury to personnel or damage to materiel will be reported on DA Form 285, U.S. Army Accident Report in accordance with AR385-40, Accident Reporting and Records. Explosives and ammunition malfunctions will be reported in accordance with AR 75-1, Malfunctions Involving Ammunition and Explosives.

(MC) Maintenance forms and records used by Marine Corps personnel are prescribed by TM 4700-15/1, Equipment Record Procedures.

(F) Maintenance forms and records used by Air Force Personnel are prescribed in AFI 21-101, Maintenance Management of Aircraft and the applicable TO 00-20, Series Technical Orders.

(N) Navy users should refer to their service peculiar directives to determine applicable maintenance forms and records to be used.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

(A) Army- If your M203 series 40-mm Grenade Launcher needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to follow the instructions and links below:

For ALL non-Aviation/Missile Warranty, EIR and PQDRs must be submitted through the Web Product Quality Deficiency Reporting (PQDR) site. Note that all CECOM managed (B16), including aviation, items must also be submitted through the following site. The Web PQDR Web site is:

<http://www.nslcptsmh.csd.disa.mil/webpqdr/webpqdr.htm>. New accounts can be established at the following address:

<http://www.nslcptsmh.csd.disa.mil/accessforms/uarform.htm>. All AMCOM (Aviation and Missile Command) Deficiency Reports (DRs), (Warranty, EIR, and PQDRs) must be submitted through the Joint Deficiency Reporting System (JDRS) at

https://jdrs.mil/DR_Initiate.cfm?service=AR. You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 using e-mail, regular mail, or fax using the addresses/fax numbers specified in (DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual OR DA PAM 738-751, Functional Users Manual for the Army Maintenance Management Systems - Aviation (TAMMS-A) for aviation systems. We will send you a reply.

(F) Air Force- Send Materiel Deficiency Report (MDR) and Product Quality Deficiency Report to WR-ALC/LZBS, Robins AFB GA 31098-5609 in accordance with TO 00-35D-54 Materiel Deficiency Reporting and Investigating System.

(M) Marine Corp- Submit notice of discrepancies or suggest changes on a NAVMC 10772. Users with CAC/PKI certificates may submit the NAVMC via the Internet using website <https://pubs.ala.usmc.mil/navmc/default.asp>. The form can be filled in and submitted via the automated NAVMC 10772 Tracking Program. NAVMC forms may also be submitted by electronic mail attachments to SMB.LOG.Tech.Pubs.fct@usmc.mil, or by mailing a paper copy of the NAVMC 10772 in an envelope addressed to Commander, Marine Corps Systems Command, Attn: Assistant Commander Acquisition and Logistics (LOG/TP), 814 Radford Blvd. Suite 20343, Albany, Georgia 31704-0343. Problems or questions regarding the NAVMC 10772 program should be reported by calling DSN 567-7574, DSN 567-7628, DSN 567-5017, or DSN 567-6439. In addition to electronic submittal of the NAVMC form via the above web links, forward an informational copy (cc:) or mail a paper copy to the Life Cycle Logistician at the following address: Commander, Marine Corps System Command, Attn: PMM-132 (IW), 814 Radford Blvd, STE 20343, Albany, GA, 31704-0343.

(N) Navy- Send Quality Deficiency Report to Commander, Naval Surface Warfare Center, Crane Division, Code 2041, Crane, IN 47522-5020.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion prevention and control of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking.

Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically ultraviolet) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking. SF Form 368, Product Quality Deficiency Report should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

HAZARDOUS WASTE DISPOSAL INFORMATION

When servicing this weapon, performing maintenance, or disposing of materials such as: cleaning fluids, dry cleaning solvents, lubricants, waste thread locking compounds, and waste CARC mixtures (or items, such as cleaning rags, contaminated with these substances) consult your unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact The Army Environmental Hotline at 1-800-872-3845 / OCONUS: 410-436-1244 or online at <http://aec.army.mil/usaec/contactus.html> <<http://aec.army.mil/usaec/contactus.html>> . Accidental or intentional introduction of contaminants into the environment violates military, state, and federal regulations. Failure to comply may adversely affect the public or environment.

DESTRUCTION OF MATERIAL TO PREVENT ENEMY USE

Procedures and materials used for the destruction of the M203 series 40-mm Grenade Launcher in order to prevent enemy use will be found in TM 750-244-7, Procedures for Destruction of Equipment to Prevent Enemy Use.

PREPARATION FOR STORAGE OR SHIPMENT

LIST OF ABBREVIATIONS/ACCRONYMS**Abbreviation/Acronym**

AAL	Additional Authorization List
BII	Basic Issue Items
COEI	Components of End Item
H3	Radioactive tritium gas
in	inch
fps	feet per second
kg	kilogram
lb	pound
m	meters
mm	millimeter
mps	meters per second
N/A	not applicable
SOP	Standard operating procedures

DEFINITION OF ALERTS THROUGHOUT THIS MANUAL:

WARNING: Identifies a danger to the operator or others near the operator.

CAUTION: Identifies risk of damage to the equipment.

NOTE: Used to highlight essential procedures, conditions, statements or important instructional data.

END OF WORK PACKAGE

EQUIPMENT CHARACTERISTICS AND DATA

CHARACTERISTICS

The M203 series 40-mm Grenade Launcher is a single shot weapon designed for use with the M16A2 and fires a 40-mm grenade. The M203A1 40-mm Grenade Launcher is a single shot weapon designed for use with the M4/M4A1 carbines and fires a 40-mm grenade. The M203A2 is a single shot weapon designed for use with the M16A3/M16A4 and M4/M4A1 with Adapter Rail System and fires a 40-mm grenade. The M203A2 also has a quick release bracket used with the adapter rail system.

CAPABILITIES AND FEATURES

The M203 series 40-mm Grenade Launcher are composed of the following: barrel, receiver, handguard, leaf sight, mounting hardware and quadrant sight. The M203 series 40-mm Grenade Launcher have a leaf sight and a quadrant sight.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

The M203 series 40-mm Grenade Launcher is a single shot weapon designed for use with the M16 series rifles. It has leaf and quadrant sights and fires a 40mm grenade.

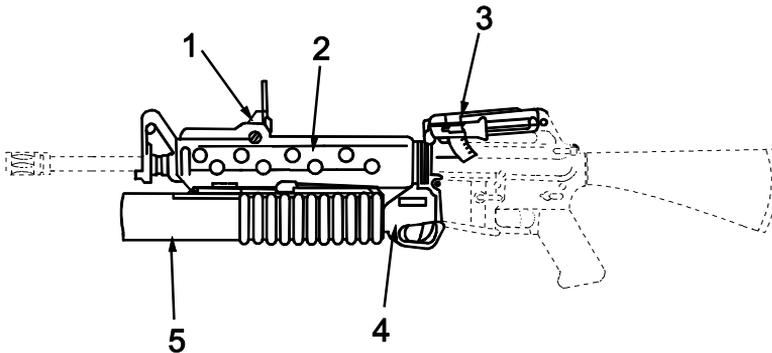


Figure 1. M203 Grenade Launcher W/E

1. Leaf sight assembly
2. Handguard assembly
3. Quadrant sight assembly
4. Receiver assembly
5. Barrel assembly

Location and Description of Major Components-(CONTINUED)

The M203A1 Grenade Launcher is a single shot weapon designed for use with the M4 series carbines. It has leaf and quadrant sights and fires a 40mm grenade.

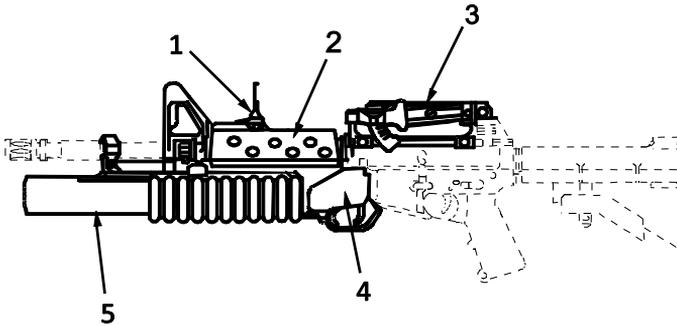


Figure 2. M203A1 Grenade Launcher W/E

1. Leaf sight assembly
2. Handguard assembly
3. Quadrant sight assembly
4. Receiver assembly
5. Barrel assembly

The M203A2 Grenade Launcher is a single shot weapon designed for use with M16 series rifles and the M4 series carbines equipped with adapter rail systems. It has rail grabber, leaf and quadrant sights and fires a 40mm grenade. The M203A2 has a quick release bracket used with the adapter rail system.

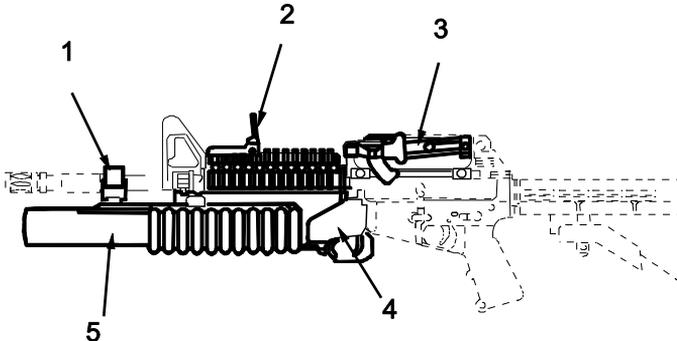


Figure 3. M203A2 Grenade Launcher W/E

1. Quick release bracket
2. Leaf sight assembly
3. Quadrant sight assembly
4. Receiver assembly
5. Barrel assembly

EQUIPMENT DATA**M203/A1/A2**

Caliber.....40mm
Weight.....3 lbs.
Weight w/M16A2.....11.81 lbs.
 w/M16A3/A4.....12.13 lbs.
 w/M4.....10.75 lbs.
 w/M4A1.....11.63 lbs.
Barrel Length.....12 in.
Length of Rifling.....10 in.
Maximum Range.....400m/1320ft
Maximum Effective Range
 Area Target.....350m/1155ft
 Point Target.....150m/495ft
Minimum Safe Range
 Combat.....31m/102ft
 Training.....165m/541ft

END OF WORK PACKAGE

THEORY OF OPERATION

1. Open the grenade launcher barrel, place the weapon on **SAFE**, insert a round, and close the barrel.
2. Place the launcher to shoulder. Keep muzzle pointed at target and move the safety from the **SAFE** to the **FIRE** position.
3. Align the front and rear sight with the target and squeeze the trigger.
4. Squeezing the trigger releases the firing pin and allows it to impact the primer on the round.
5. The primer ignites the propellant in the round.
6. Gas from the burning propellant pushes the projectile along the barrel of the launcher.
7. The rifling in the barrel causes the projectile to rotate, which provides stability during flight to the target.

END OF WORK PACKAGE

CHAPTER 2
OPERATOR INSTRUCTIONS
FOR
LAUNCHER, GRENADE, 40-MM, M203
LAUNCHER, GRENADE, 40-MM, M203A1
LAUNCHER, 40-MM, M203A2

DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS**CAUTION**

The 50 meter (165 ft) mark on the leaf sight blade is marked in red to emphasize this range is not to be used in zeroing processes.

NOTE

DO NOT switch leaf sight blades. The leaf sight blades are different lengths on the M203, M203A1 and the M203A2. Leaf sight (Range) scale is in meters, 50 (red), 100, 150, 200, 250. Meters are not marked on sight.

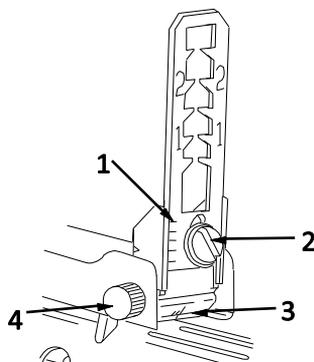


Figure 1. Leaf Site

1. Elevation adjustment increments (10 meters)
2. Elevation adjustment screw
3. Windage adjustment increments (1.5 meters)
4. Windage adjustment screw

Leaf Sight: Aligns with the front sight post of the M16 Series Rifles or M4 Series Carbine. Raise leaf sight to blade to increase range, lower leaf sight blade to decrease range.

Windage Adjustment Screw: Turn clockwise to move leaf sight left for wind from the left; turn counter-clockwise to move leaf sight right for wind from the right.

Elevation Adjustment Screw: Loosen elevation adjustment screw to move leaf sight blade up or down. Tighten screw to lock blade into place

**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS-
(CONTINUED)**

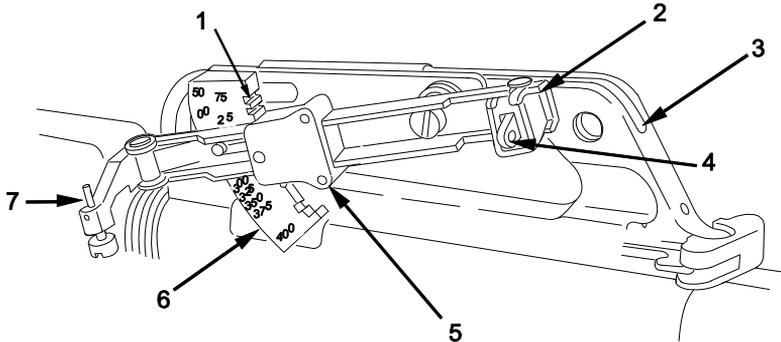


Figure 2. Quadrant Sight

1. Notch
2. Retainer
3. Carry handle
4. Rear aperture
5. Latch
6. Range quadrant
7. Front sight post

Quadrant Sight: Attaches to carrying handle. Unfold front sight post and rear aperture to use. The quadrant sight can be used on both the integral carrying handle (M16A2) and the removable carrying handle (M16A4/M4)

Front Sight Post: Turns right for lower elevation and left for higher elevation to compensate for head-wind or rear-wind.

Rear Aperture: Compensates for wind from the right or the left.

Retainer: Depressing retainer allows rear aperture to slide in or out.

Latch: Releasing latch allows sight to move up and down. Engaging latch locks sight in to place.

Notch: Latch engages the notch to hold sight in place.

Range Quadrant: Lists distances and has notches for latch to engage.

DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS-(CONTINUED)

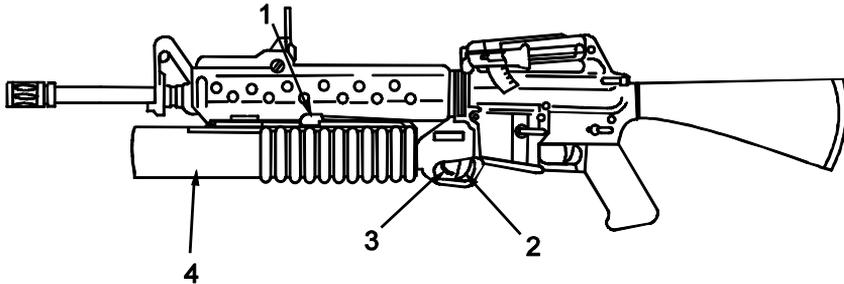


Figure 3. Barrel Latch

1. Barrel latch
2. Trigger
3. Safety
4. Barrel

Barrel Latch: Locks barrel in the closed position. Press latch and slide barrel forward to load or unload the weapon.

Trigger: Squeezing the trigger fires the launcher.

Safety: The safety has two positions-SAFE and FIRE. Keep safety on SAFE position until ready to fire. Pull safety towards trigger for SAFE position. Push safety away from trigger for FIRE position.

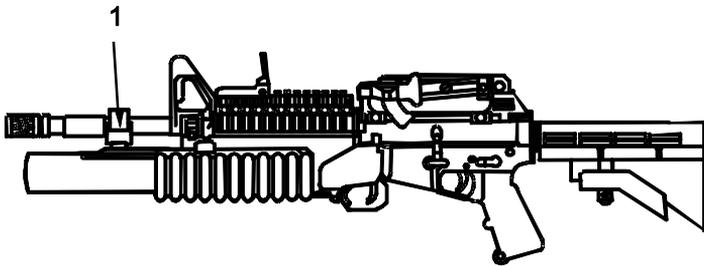


Figure 4. Quick release bracket

1. Quick release bracket

Quick-Release Bracket: The M203A2 has a quick release bracket used with the adapter rail system.

END OF WORK PACKAGE

OPERATION UNDER USUAL CONDITIONS

ASSEMBLY AND PREPERATION FOR USE

There are currently two versions of Quick Release Bracket (QRB) in the field. If either is dismounted from host weapon the grenade launcher must be re-zeroed. Old version of QRB employs a retaining spring (Figure 1, Item 2) that slides under the lip of the release plunger (Figure 1, Item 3) to protect against accidental release of QRB. Five-position shim plate (Figure 1, Item 1) slides in to groove directly behind front wall of QRB.

NOTE

In figure 1 below view is from front (muzzle).

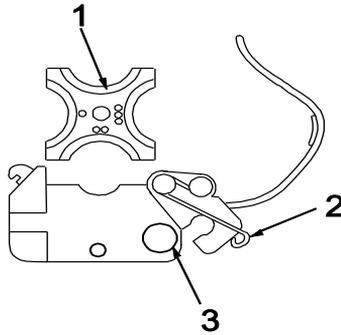


Figure 1. Quick Release Bracket

The new version of the Quick Release Bracket (QRB) has a cam lever (Figure 2, Item 2) that rotates and locks into place to protect against accidental release of QRB. Five-position shim plate (Figure 2, Item 1) slides in to groove directly behind front wall of QRB.

NOTE

In figure 2 below view is from front (muzzle).

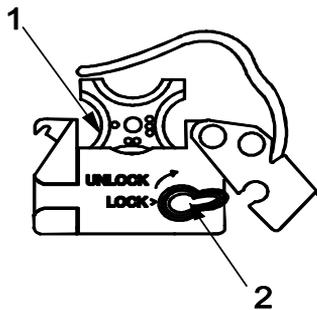


Figure 2. New Quick Release Bracket

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

The basic overall length between the barrel nut roll pin at the rear of the M203 receiver and the front of the starting position shim plate cutout surface (no dots) is approximately 11in (28cm). When grenade launcher is mounted on the M16 series rifles or M4 series carbines with the shim plate in the starting position, some sliding motion may be detectable. The sliding will occur between the rifle barrel stop and shim on the M16 series rifles or the carbine barrel shoulder on the M4 series carbines. If this occurs, take the shim plate out of the quick release bracket and rotate the shim plate to the #2 position (one dot) (Figure 3, Item 6) and remount the grenade launcher. Continue to do this with each of the positions until the sliding motion is minimized. If the cutout stops fitting on the host weapon when changing positions on the shim plate, return the shim plate to the next lower position and secure, close, and lock the quick release bracket into place. The latch arm in the locked position can compensate for any slight movement still detectable.

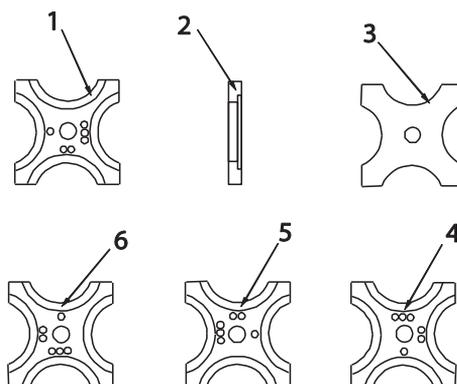


Figure 3. Five Position Shim Plate.

1. Front view, starting position (all dots facing muzzle).
2. Side view
3. Back view, fifth position.
4. # 4 position
5. # 3 position
6. # 2 position

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

1. Set five-position shim plate in bracket to minimum position.

NOTE

Ensure that roll pin in rear of M203 receiver engages the barrel nut at the six o'clock position. When 203 is mounted to host weapon, weapon must be re-zeroed.

2. **RIFLE:** Remove lower rail of adapter rail system from M16A3/A4 (Figure 4, Item 1). Ensure barrel stop is installed inside handguard cap. Move rear of M203 (Figure 4, Item 4) receiver into position around rifle barrel. Fully open latch arm (Figure 4, Item 2) of QRB (Figure 4, Item 3). Rotate muzzle end of M203 towards rifle barrel while sliding it firmly to the rear.

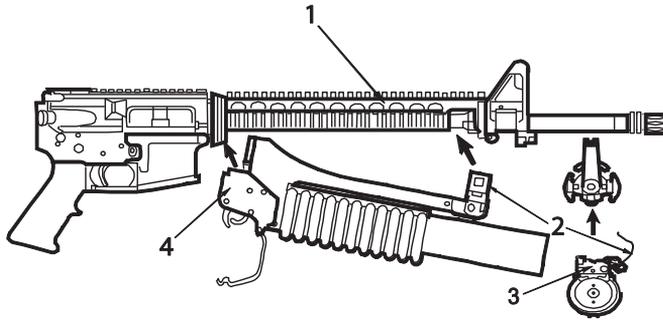


Figure 4. Rifle/QRB Installation.

NOTE

Ensure that roll pin in rear of M203 receiver engages M4/M4A1 barrel nut at six o'clock position notch.

3. **CARBINE:** Remove lower rail of adapter rail system from M4/M4A1 (Figure 5, Item 1). Move rear of M203 (Figure 5, Item 4) receiver into position around M4/M4A1 barrel. Fully open latch arm (Figure 5, Item 2) of QRB (Figure 5, Item 3). Rotate muzzle end of M203 towards M4/M4A1 barrel while sliding it firmly to rear.

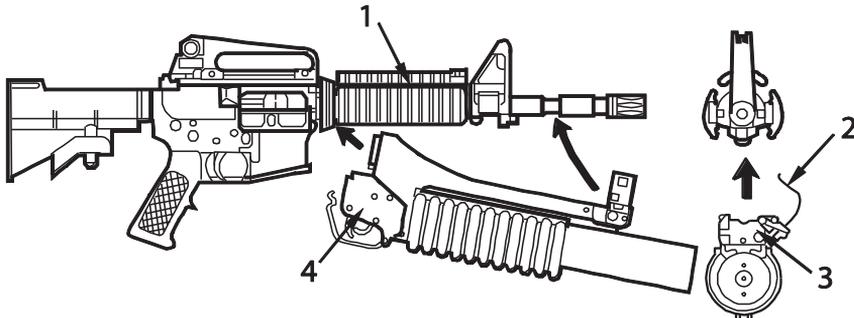


Figure 5. Carbine/QRB Installation.

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)**NOTE**

Redo steps 2 and 3 until the M203 is tight. If cutout stops fitting on host weapon when changing positions of shim plate, return shim plate to next lower position.

3. **RIFLE:** Slide latch arm (Figure 6, Item 3) on QRB (Figure 6, Item 4) between barrel (Figure 6, Item 2) and gas tube (Figure 6, Item 1). Close latch arm around barrel and test for movement of M203. If there is movement, remove M203 (Figure 6, Item 5) and reposition the shim plate.

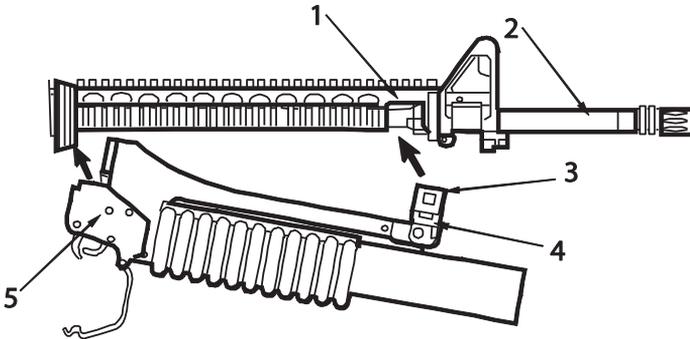


Figure 6. Rifle/QRB Installation.

NOTE

If movement is detected, reposition shim plate to minimize movement and repeat steps 2 and 3. If shim plate does not fit behind barrel shoulder, reposition M203 and/or five-position shim plate until it rests behind the barrel shoulder.

In Figure 7, #6 is correct view; barrel shoulder fits into cutout in shim plate. # 5 is the incorrect view; barrel shoulder does not fit into cutout in shim plate.

CARBINE: Close latch arm (Figure 7, Item 4) around barrel shoulder (Figure 7, Item 1) of carbine barrel (Figure 7, Item 2). Inner notch of shim plate (Figure 7, Item 3) should rest just behind shoulder of barrel. Check for movement.

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

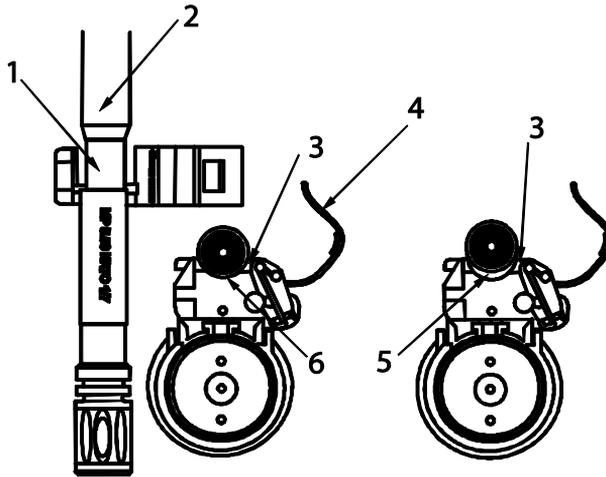


Figure 7. Carbine/QRB Installation.

4. Close latch arm (Figure 8, Item 3) over barrel (Figure 8, Item 1) and catch latch hook (Figure 8, Item 2) in hole.
5. Rotate latch lever (Figure 8, Item 4) down.

NOTE

Ensure retaining spring (Figure 8, Item 5) does not engage plunger during this step.

6. Old version QRB. Engage plunger (Figure 8, Item 6).

New version QRB While engaging plunger (Figure 8, Item 7), rotate plunger clockwise until it stops in the unlocked position.

7. Old version QRB. Squeeze latch lever (Figure 8, Item 1) fully closed, release plunger (Figure 8, Item 1).

New version QRB plunger (Figure 8, Item 7) will snap forward and then must be rotated counter-clockwise until it stops in the locked position.

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

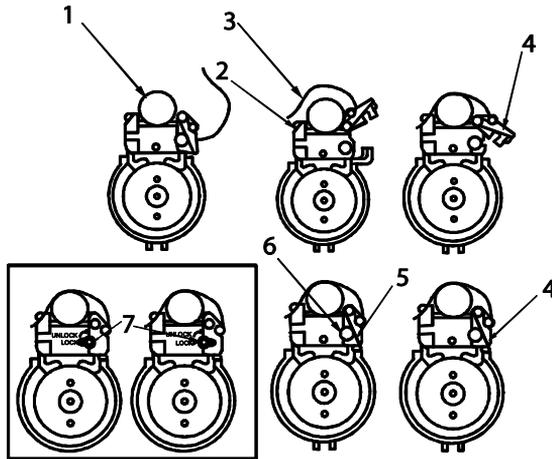


Figure 8 QRB Installation

Preparation for Firing

Perform Before Operation (B) Preventive Maintenance Checks and Services (PMCS). Refer to WP 0010

Firing M203/M203A1/M203A2 Grenade Launcher

Estimate distance to target. Aim at base of target. Short Range Targets (50m/165 ft or less): To adjust leaf sight loosen elevation adjustment screw to move sight up to increase range for headwind, lower to decrease range for rear wind. 1 increment = 10 meters (33 ft) at 200 meter (660 ft) range. Turn Windage adjustment screw clockwise to adjust for wind from left, turn counterclockwise to adjust for wind from right. 1 increment = 1.5 meters (5ft) at 200 meter (660 ft) range.

Place leaf sight (Figure 9, Item 1) down and aim with M16/M4 sights (Figure 9 Item 2).

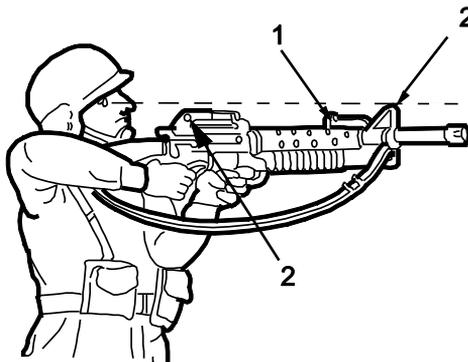


Figure 9. Short range targetry

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

Mid Range Targets (50-250m/165-820ft):

Raise leaf sight (Figure 10 Item 1). Line up front sight post (Figure 10 Item 2) of M16/M4 with proper mark on leaf sight to aim.

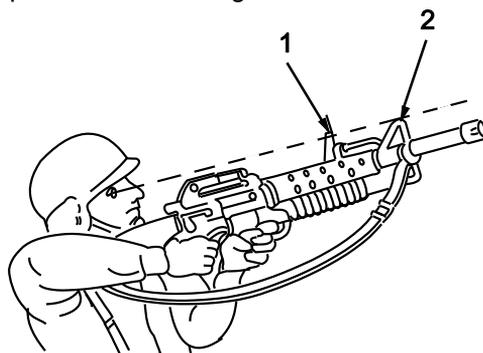


Figure 10. Mid range targetry

Long Range Targets 50-400m/(165-1320 ft): Use quadrant sight. Elevation adjustment: 1 notch = 5 meters (17 ft) at 200 meter (660 ft) range, lower retainer and slide rear aperture in to adjust for wind from right, slide rear aperture out to adjust for wind from left. Vertical line marks the center and 1 notch = 1.5 meters (5 ft) at 200 meter (660 ft) range. Look through rear aperture (Figure 11 Item 2) to front sight post (Figure 11 Item 3) of quadrant sight (Figure 11 Item 1) to aim.

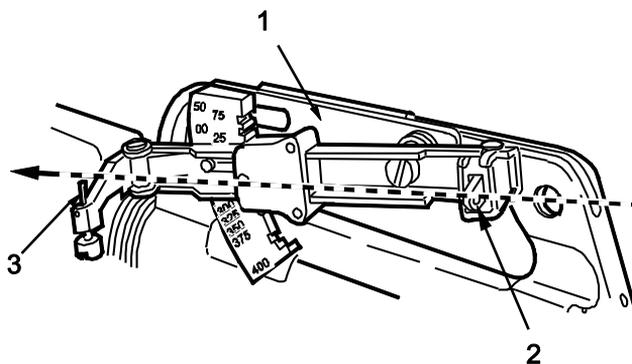


Figure 11. Long range targetry

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

Launcher may be fired from standing, kneeling, or prone position. Place stock of weapon on the ground when firing long range from prone position. Hold stock firmly against shoulder for all other positions.

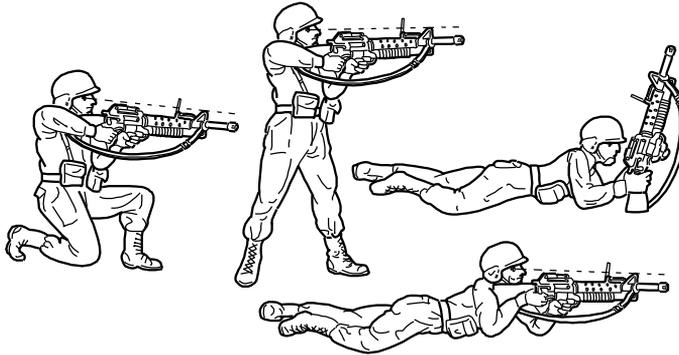


Figure 12. Multi-position targetry

Loading and Firing**WARNING**

- **Hearing protection is required for all personnel within 20 meters of a weapon firing any pyrotechnic type rounds.**
- **DO NOT fire unauthorized ammunition with grenade launcher**
- **Ensure there are no obstacles (sling, branches, etc.) in line of fire as they can block flight of round causing injury or death to personnel.**

CAUTION

ALWAYS ensure bore and chamber are clean and dry before loading.

Only dry fire the M203 when performing PMCS listed in technical manuals or to remove spring tension prior to storing weapon. Excessive dry firing may result in damage to breech insert or receiver.

1. Keep safety in safe position until ready to fire.

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

2. Press latch and slide barrel forward.
3. Insert ammunition into chamber.
4. Slide barrel closed until it locks (click).
5. Determine target distance and select range.
6. Aim at target.
7. Move safety to fire position.

NOTE

Practice breath control when firing the rifle.

8. Squeeze trigger to fire weapon.

ZEROING**WARNING**

When firing High Explosive (HE) grenades at targets within 165 meters (541 ft) (minimum safe), be in a protected position. When training (minimum safe), do not fire at targets within 165 meters (541 ft). DO NOT zero in under 100 meters (330ft).

NOTE

Hitting the target depends upon user's ability to determine range.

1. Select a target at 200 meters (660ft) and fire a round. If round does not fall within 5 meters (17ft) of target as seen in Figure 5, zero weapon as follows:
 - a. Adjust sight for more or less elevation.
 - b. Adjust windage for each firing.
 - c. After each round is fired, adjust until three consecutive rounds land within 5 meters (17ft) of aiming point.

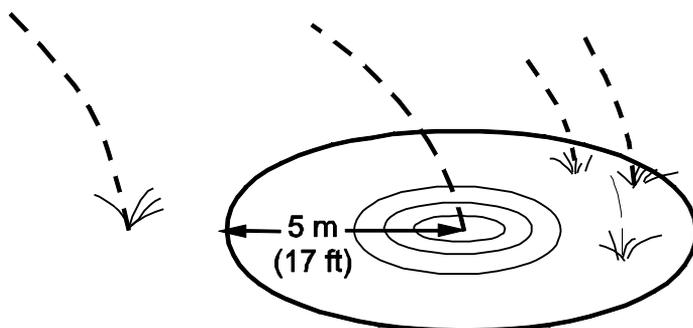
OPERATION UNDER USUAL CONDITIONS-(CONTINUED)

Figure 13. Zeroing.

Unloading

1. Press latch and move barrel forward.
2. Round automatically extracts and ejects.

DISMOUNTING FROM HOST WEAPON**NOTE**

If the M203 with QRB is dismounted from host weapon, operator must re-zero the host weapon.

1. Hold retaining spring (Figure 14 Item 2) away from plunger (Figure 14 Item 1).
2. Depress plunger (Figure 14 Item 1).
3. Rotate latch lever (Figure 14 Item 3).
4. Disengage latch arm (Figure 14 Item 5) from hook (Figure 14 Item 4).

NOTE

Failure to successfully perform step 5 may result in loss of QRB internal shim plate. If the shim plate is lost or damaged contact field maintenance personnel. It will be necessary to hold retaining spring away from plunger to allow latch lever to engage plunger. There will be an audible click when latch lever has engaged plunger and plunger will snap forward toward muzzle.

5. Press latch lever (Figure 14 Item 3) fully downward until engages plunger (Figure 14 Item 1).

OPERATION UNDER USUAL CONDITIONS-(CONTINUED)**NOTE**

When performing this step on rifle, carefully pull latch arm from position between gas tube and barrel.

6. Rotate latch arm (Figure 14 Item 5) up and out of the way to its fully open position.

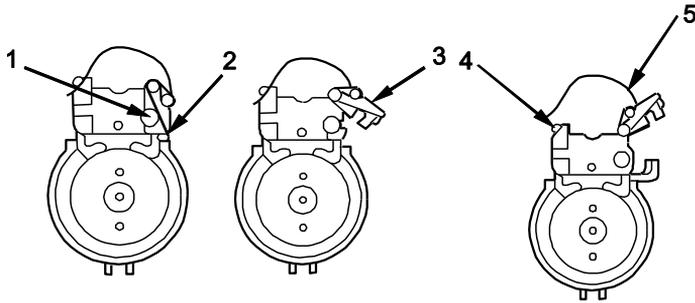


Figure 14

7. Disengage trigger guard from magazine well.

END OF WORK PACKAGE

OPERATION UNDER UNUSUAL CONDITIONS**NOTE**

Keep the weapon clean and lubricated with CLP (WP 0016, Item 1).

HOT, DUSTY AND SANDY AREAS

Clean weapon at least once a day. Place 2-3 drops of CLP (WP 0016, Item 1) in firing pin hole twice a day. Cover weapon as much as possible. Keep sand out of parts.

HOT, SALTY, WET CLIMATES-JUNGLE

Rain, humidity, and salty air contaminates the lubricant and can cause corrosion on the weapon. Dry, clean, and lubricate as necessary. Inspect grenade launcher daily.

EXTREME COLD CLIMATE-ARCTIC

Keep weapon wrapped in a parka or blanket when it is brought from a cold area to a warm area. Allow it to reach room temperature gradually. If condensation forms, dry and lubricate at room temperature before taking it out into cold weather to keep ice from forming in the mechanism. Keep ice and snow out of operating parts.

IMMERSION IN WATER

Disassemble weapon, dry, clean, oil, and reassemble as soon as possible. Make sure grenade launcher is completely dry.

**NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC),
DECONTAMINATION PROCEDURES**

General procedures can be found in FM 3-87, Nuclear, Biological, and Chemical (NBC) Reconnaissance and Decontamination Operations (How To Fight), FM 21-40, NBC (Nuclear, Biological, and Chemical) Defense and TM 3-220, Chemical, Biological, and Radiological (CBR) Decontamination.

END OF WORK PACKAGE

CHAPTER 3

TROUBLESHOOTING PROCEDURES

FOR

LAUNCHER, GRENADE, 40-MM, M203

LAUNCHER, GRENADE, 40-MM, M203A1

LAUNCHER, GRENADE, 40-MM, M203A2

TROUBLE SHOOTING INDEX**MALFUNCTIONS/SYMPTOM INDEX**

<u>Malfunction/Symptom</u>	<u>Troubleshooting Procedure</u>
1. Failure to Chamber.....	WP008
2. Failure to Clear.....	WP008
3. Failure to Extract.....	WP008
4. Failure to Fire.....	WP008
5. Failure to Lock.....	WP008
6. Hangfire.....	WP008
7. Misfire.....	WP008
8. Unsecure from Host Weapon.(203/203A1).....	WP008
9. Unsecure from Host Weapon.(203A2).....	WP008

END OF WORK PACKAGE

TROUBLESHOOTING PROCEDURES

INITIAL SETUP
N/A

GENERAL

Troubleshooting procedures are limited to those listed in the troubleshooting table. The table lists the common malfunctions which you may find during the maintenance of the M203 series 40-mm Grenade Launcher. You should perform the tests/inspections and corrective actions in the order listed. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

Troubleshooting Procedure**SYMPTOM**

Lack of discharge

MALFUNCTION

FAILURE TO FIRE

CORRECTIVE ACTION

STEP 1. Check for excessive oil or water in back of breech insert.

a. Point weapon up for 10 to 15 seconds and hand function.

STEP 2. Check for dirt and/or residue in firing pin hole.

a. Clean thoroughly.

STEP 3. Check for dirt in locator slot.

a. Clean thoroughly.

STEP 4. Check for faulty ammunition.

a. Replace ammunition

SYMPTOM

Lack to clear round

MALFUNCTION

FAILURE TO EXTRACT

CORRECTIVE ACTION

STEP 1. Check for casing stuck in barrel.

a. Remove stuck case with rifle cleaning rod.

SYMPTOM

Failure to chamber

MALFUNCTION

FAILURE TO CHAMBER

TROUBLESHOOTING-CONTINUED**CORRECTIVE ACTION**

STEP 1. Check for faulty ammunition.

a. Replace ammunition

STEP2. Check for dirty chamber

a. Clean bore and chamber

SYMPTOM

Failure to lock

MALFUNCTION

FAILURE TO LOCK

CORRECTIVE ACTION

Notify field maintenance.

SYMPTOM

Failure to clear

MALFUNCTION

FAILURE TO CLEAR

CORRECTIVE ACTION

STEP 1. Check for stuck case.

a. Clear stuck case.

SYMPTOM

Hangfire

MALFUNCTION

HANGFIRE

CORRECTIVE ACTION

STEP 1. Unload the round close to ground for a short fall.

STEP 2. Check for faulty ammunition.

a. Replace ammunition.

STEP 3. Check for faulty firing mechanism.

a. Notify field maintenance.

SYMPTOM

Misfire

MALFUNCTION

MISFIRE

CORRECTIVE ACTION

STEP 1. Unload the round close to ground for a short fall.

STEP 2. Check for faulty ammunition.

a. Replace ammunition.

STEP 3. Check for faulty firing mechanism.

a. Notify field maintenance.

TROUBLESHOOTING-CONTINUED

SYMPTOM

Unsecure from host weapon (203/203A1)

MALFUNCTION

NONSECURE FROM HOST WEAPON (203/203A1)

CORRECTIVE ACTION

Notify field maintenance.

SYMPTOM

Unsecure from host weapon (203A2)

MALFUNCTION

NONSECURE FROM HOST WEAPON (203A2)

CORRECTIVE ACTION

STEP 1. Refer to WP 4 (QUICK RELEASE BRACKET (QRB))

END OF WORK PACKAGE

CHAPTER 4
PMCS MAINTENANCE INSTRUCTIONS
FOR
LAUNCHER, GRENADE, 40-MM, M203
LAUNCHER, GRENADE, 40-MM, M203A1
LAUNCHER, GRENADE, 40-MM, M203A2

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION

Preventive Maintenance Checks and Services (PMCS) means systematic caring, inspecting, and servicing of equipment to keep it in good condition and to prevent breakdowns. User's mission:

GENERAL

- a. Ensure to perform PMCS each time grenade launcher is used. Perform PMCS in same order
- b. Perform the Before PMCS just before firing grenade launcher.
- c. Perform the During PMCS while using grenade launcher.
- d. Perform the After PMCS right after the grenade launcher.
- e. Use DA Form 2404, Equipment Inspection and Maintenance Worksheet to record any faults that are discovered before, during, or after use unless you can perform repair. Do not record faults you fix.

END OF WORK PACKAGE

PREVENTATIVE MAINTENANCE CHECKS AND SERVICES (PMCS) WITH LUBERICATION INSTRUCTIONS

INITIAL SETUP

Materials/Parts

- Cleaner, Lubricant, Preservative (CLP) (WP 0016, Item 1)
 - Lubricating Oil, Weapons Semi-Fluid (LSA) (WP 0016, Item 4)
 - Lubricating Oil, Weapons (LAW) (WP 0016, Item 3)
 - Rifle Bore Cleaning Compound (RBC) (WP 0016, Item 2)
-

PMCS PROCEDURES

- a.** Preventive Maintenance Checks and Services (PMCS) table lists inspections and care required to keep your pistol in good operating condition.
- b.** The "Item No." column of the PMCS table tells disassembly sequence order.
- c.** The "INTERVAL" column of PMCS table tells when to perform check or service.
- d.** The "PROCEDURE" column of the PMCS table tells how to perform required checks and services. Carefully follow these instructions. If tool is not available or procedure tells you, notify field maintenance.

NOTE

Terms "ready/available" and "mission capable" refer to same status: Equipment is on hand and ready to perform its combat missions (See DA Pam 750-8, The Army Maintenance Management System (TAMMS).)

- e.** The "NOT FULLY MISSION CAPABLE IF" column in PMCS table tells you when grenade launcher is non-mission capable and why grenade launcher cannot be used.
- f.** If grenade launcher does not perform as required, refer to Troubleshooting.
- g.** If anything looks wrong and you cannot fix it, write it on DA Form 2404, Equipment Inspection and Maintenance Worksheet IMMEDIATELY and report to supervisor.
- h.** When performing PMCS, keep rags handy.
- i.** When you check for "operating condition," look at component to see if it's serviceable.

Table 1. Preventive Maintenance Checks and Services (PMCS).

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
WARNING To prevent personnel injury or death, clear weapon before performing PMCS.				
1.	Before	Grenade Launcher and host weapon	a. Visually inspect for damaged or missing components. b. Ensure M203/M203A1 is safety wired to host weapon. c. Ensure QRB is securely attached to host weapon/M203A2.	a. There are damaged or missing components. b. M203/M203A1 not safety wired. c. QRB not securely attached to host weapon/M203A2.
2.	Before	Authorized Equipment	Check authorized equipment for serviceability and completeness	
3.	Before	Barrel Assembly	a. Check for broken and/or damaged cartridge locator and cartridge retainers. b. Check barrel for cracks, dented or other damage. c. Check for loose, cracked or missing barrel grip.	a. Cartridge locator and cartridge retainers are broken and/or damaged. b. Barrel is cracked, dented or damaged. c. Barrel grip loose, missing or crack longer than one inch.
WARNING The grenade launcher may fire without squeezing trigger if sear does not function properly.				
4.	Before	Receiver Assembly	a. Check for proper operation of sear. Cock grenade launcher and squeeze trigger. Firing pin should release. While holding trigger, cock the launcher then release trigger and squeeze trigger. Firing pin should release. b. Check safety operation in SAFE and FIRE positions. Place grenade launcher in SAFE position. Move barrel forward and back to check barrel stop and barrel latch function. c. Ensure breech insert is flush with or below the breech face.	a. Sear does not function properly. b. Safety does not function properly Barrel stop or latch does not function. If defective report to supervisor. c. Breech insert protrudes above breech face. If defective report to supervisor.

Preventive Maintenance Checks and Services (PMCS) -Continued.

5.	Before	Leaf Sight	Check leaf sight for damage. Check sight function.	Leaf sight is damaged. If defective report to supervisor.
6.	Before	Quadrant Sight	Check quadrant sight for damage and sight function.	Parts are broken, missing or not functioning properly. If defective report to supervisor.
7.	During	Grenade Launcher	a. Observe operation and function for component failure. b. Check for debris in bore.	a. Grenade launcher does not function properly. If defective report to supervisor. b. Grenade launcher does not function properly. If defective report to supervisor.
8.	After	Grenade Launcher	Inspect for damaged or missing components.	Parts are missing or damaged. If defective report to supervisor.

L

LUBRICATION INSTRUCTIONS**NOTE**

Whenever the term Cleaner, Lubricant, Preservative (CLP) or the words Lubricating Oil, Weapons Semi-Fluid (LSA), or Lubricating Oil, Weapons (LAW) are cited in this technical manual, it is interpreted to mean CLP, LSA or LAW should be used as applicable. Used, waste, and/or spilled lubricants as well as items contaminated by lubricants (such as cleaning rags) must be disposed of properly. See Hazardous Waste Disposal Information on page 0001-3 for more information.

1. Periodic lubrication can be performed without disassembling. Keep the weapon clean and lubricated even when it is not being used.
2. Perform the required lubrication during maintenance procedures.
3. CLP (WP 0016, Item 1) is the authorized lubricant.
4. Clean and lubricate grenade launcher daily after operation.
5. Clean and lubricate grenade launcher quarterly or when corrosion appears during inactive storage.
6. Under all but the coldest arctic conditions, LSA (WP 0016, Item 4) or CLP (WP 0016, Item 1) are the lubricants to use on the weapon. Either may be used at -10F (-23C) and above. **DO NOT** use both lubricants on the same weapon at the same time.

LUBRICATION INSTRUCTIONS-Continued

7. LAW (WP 0016, Item 3) is the lubricant to use during arctic conditions +10F (-12C) and below.
8. These lubricants can be used between the temperatures of -10F (-23C) and +10F (-12C).
9. **DO NOT** mix lubricants on the same weapon. The weapon must be thoroughly cleaned of lubricant when changing to a different lubricant.
10. Rifle bore cleaning compound (RBC) (WP 0016, Item 2) may be used to remove carbon buildup in the bore and other portions of the weapon.

END OF WORK PACKAGE**0010-4**

CHAPTER 5
MAINTENANCE INSTRUCTIONS
FOR
LAUNCHER, GRENADE, 40-MM, M203
LAUNCHER, GRENADE, 40-MM, M203A1
LAUNCHER, GRENADE, 40-MM, M203A2

**GRENADE LAUNCHER DISASSEMBLY, CLEANING, INSPECTION, TEST,
LUBRICATION AND ASSEMBLY**

INITIAL SETUP:	CLP (WP 0016, Item 1)
Materials/Parts	Brush, Bore Cleaning (WP 0015)
Rag Wiping (WP 0016, Item 5)	Thong, Bore Brush (WP 0015)

DISASSEMBLY**NOTE**

Quadrant sights are attached to removable carrying handle on M16A3/A4 rifles and M4/M4A1 carbines. Quadrant sights will not attach directly to rails.

1. Loosen knurled screw (Figure 1, Item 1), remove quadrant sight (Figure 1, Item 2) from host weapon (Figure 1, Item 3).

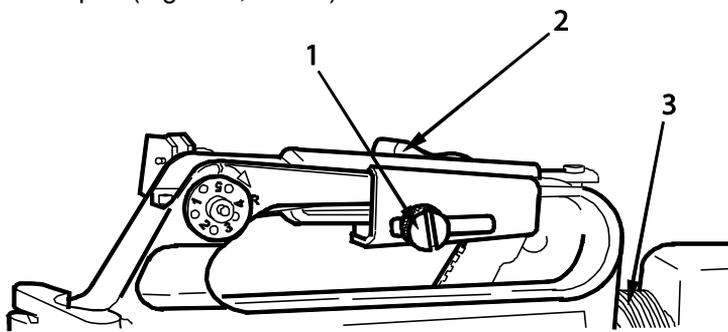


Figure 1 Quadrant Sights

NOTE

Leaf sight with rail grabber is used on M16A3/A4 rifle and M4/M4A1 carbine rail systems. Leaf sight on M16A1/A2 will need to be replaced by field level maintenance.

2. Loosen torque limiting knob (Figure 2, Item 1) on leaf sight (Figure 2, Item 2) and remove leaf sight from rail. (Figure 2, Item 3)

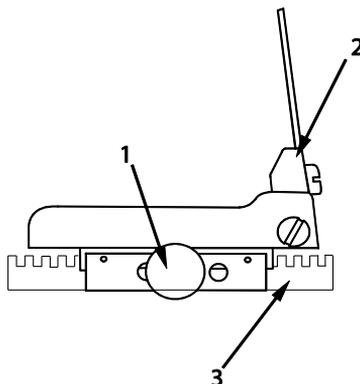


Figure 2. Leaf Sight

DISASSEMBLY-CONTINUED**NOTE**

If handguard is hard to get off, use buddy system: Stand weapon on buttstock. Grip stock with one hand and lower end of handguard with other hand. Have a buddy press down with both hands on slip ring. Pull handguard free. If removal of upper rails used with M203A2 is needed notify field level maintenance personnel.

3. Pull back slip ring (Figure 3, Item 2). Lift up on handguard (Figure 3, Item 1) and pull to the rear to remove from host weapon (Figure 3, Item 3).

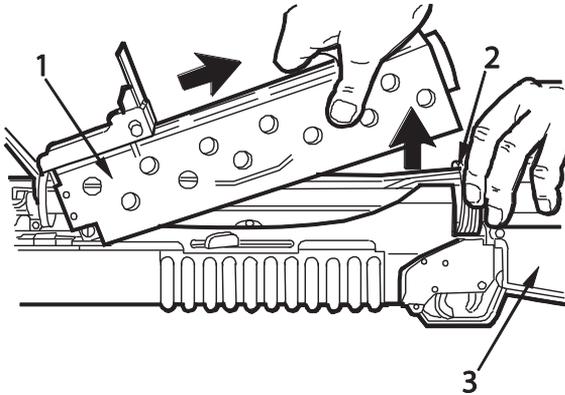


Figure 3. Handguard Leaf Sight-Disassembly.

4. Press barrel latch (Figure 4, Item 2) and move barrel (Figure 4, Item 1) forward until it stops.

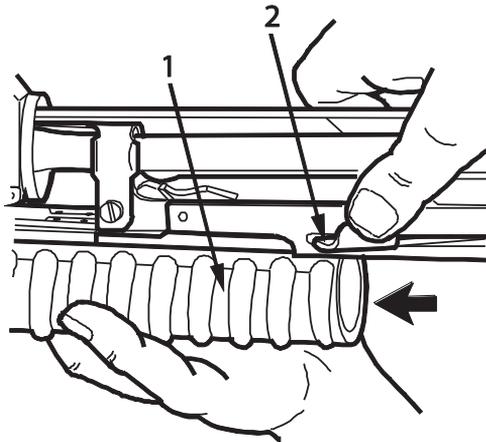


Figure 4. Barrel Latch-Disassembly.

DISASSEMBLY-CONTINUED**NOTE**

Do not interchange barrels from one weapon to another.

5. Press barrel stop (Figure 5, Item 1) with cleaning rod section (Figure 5, Item 2). Remove barrel (Figure 4, Item 4) from receiver (Figure 4, Item 3).

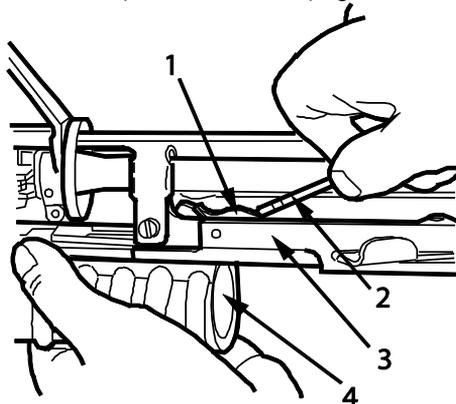


Figure 5. Barrel Stop-Disassembly.

END OF TASK**CLEAN**

1. Clean bore and chamber with bore cleaning brush (WP 0015), bore brush thong (WP 0015) and CLP (WP 0016, Item 1).

NOTE

If the M203/M203A1/M203A2 has been used to fire non-lethal ammunition, refer to any special cleaning procedures contained in the over-packed operator instructions.

2. Clean area around breech insert and firing pin hole using CLP (WP 0016, Item 1)
3. Clean all the dust and dirt from weapon using CLP (WP 0016, Item 1) and wiping rag (WP 0016, Item 5).
4. Keep locator slot (Figure 6, Item 1) on barrel (Figure 6, Item 2) clean.

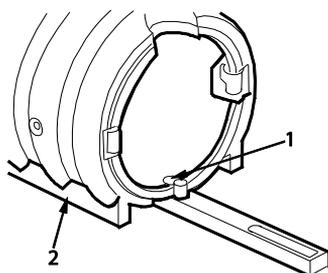


Figure 6. Locator Slot.

CLEAN-CONTINUED

5. Wipe inside of barrel with wiping rag (WP 0015) to remove any remaining CLP (WP 0016, Item 1) after cleaning.

END OF TASK**INSPECTION****WARNING**

ALWAYS ensure weapon is not loaded.

1. Check grenade launcher for cracks, burrs, wear, dents, rust, dirt, and corrosion.
2. Inspect bore for dirt, water, oil, and foreign matter.
3. Check for loose or protruding breech insert.
4. Check **SAFE** and **FIRE** positions.
5. Check barrel latch.
6. Check for missing or broken parts. Report missing/broken parts to field maintenance.

NOTE

The quick release bracket (QRB) does not require the use of safety wire.

7. Ensure M203 is safety wired.

END OF TASK

TEST**WARNING**

ALWAYS ensure weapon is not loaded.

1. Move barrel (Figure 7, Item 2) forward and back to ensure barrel stop (Figure 7, Item 1) and barrel latch (Figure 7, Item 3) function.

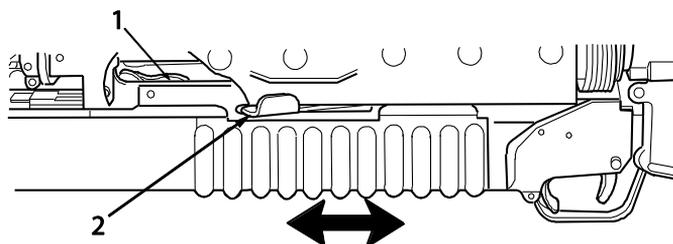


Figure 7. Barrel Test.

NOTE

Launcher must be cocked before safety can be placed in safe position.

2. In both safe and fire positions ensure safety operation.
3. Cock grenade launcher and squeeze trigger. Firing pin should release. Hold trigger to rear and cock grenade launcher. Release trigger and then squeeze trigger. Firing pin should release.

END OF TASK**LUBRICATION**

1. Move barrel forward and lubricate locator slot and barrel tracks with CLP (WP 0016, Item 1).
2. Lubricate all metal surfaces with a light coat of CLP (WP 0016, Item 1).
3. With barrel installed, apply a few drops of CLP (WP 0016, Item 1) through firing pin hole. Keep weapon pointed up 10-15 seconds. Cycle weapon and squeeze trigger to spread the oil.

NOTE

Safety detent is in the receiver in front of the safety. Used, waste, and/or spilled lubricants as well as items contaminated by lubricants (such as cleaning rags) must be disposed of properly. See Hazardous Waste Disposal Information on page 0001-3 for more information.

4. Turn grenade launcher upside down and lubricate safety detent with CLP (WP 0016, Item 1).
5. Clean all dust/dirt from QRB with CLP (WP 0016, Item 1).

END OF TASK

ASSEMBLY

1. Press barrel stop (Figure 8, Item 1) with cleaning rod section (Figure 8, Item 2). Slide barrel (Figure 8, Item 4) onto receiver (Figure 8, Item 3).
2. Move barrel rearward to close.

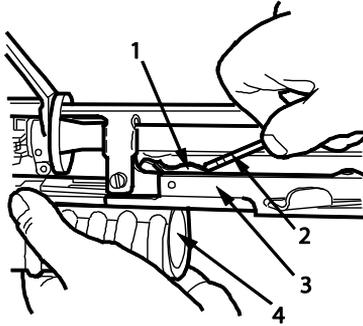


Figure 8. Barrel Stop-Assembly.

NOTE

If installing handguard is difficult, use buddy system: Stand weapon on buttstock. Grip stock with one hand and lower end of handguard with other hand. Have a buddy press down with both hands on slip ring. Slide handguard up and in to install. Release slip ring over handguard flange to lock handguard in place.

3. Pull slip ring (Figure 9, Item 2) rearward, slide handguard (Figure 9, Item 1) forward and down to install on host weapon (Figure 9, Item 3). Release slip ring over the handguard flange to lock handguard in place.

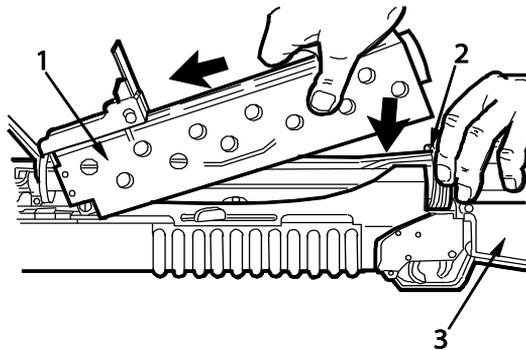


Figure 9. Handguard Leaf Sight-Assembly

ASSEMBLY-CONTINUED

4. Turn torque limiting knob (Figure 10, Item 1) on leaf sight (Figure 10, Item 2) counter-clockwise until it stops.

NOTE

CARBINE: Recoil lug of the rail grabber will be located in slot "T24" on the rail.

RIFLE: Recoil lug of the rail grabber will be located in slot "T38" on the rail.

5. Align leaf sight (Figure 10, Item 2) on rail (Figure 10, Item 3) appropriately.
6. Sit leaf sight (Figure 10, Item 2) on rail (Figure 10, Item 3) so it is flush with rail then turn torque limiting knob (Figure 10, Item 1) until it clicks twice.

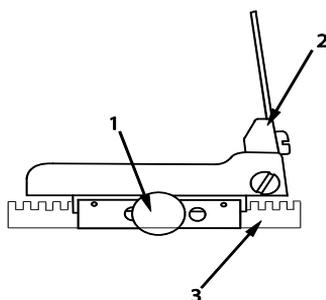


Figure 10. Leaf Sight-Assembly.

NOTE

- If installation of upper rails used with M203A2 is needed notify field level maintenance personnel.
- Quadrant sights are attached to removable carrying handle on M16A3/A4 rifles and M4/M4A1 carbines. Quadrant sights will not attach directly to rails.

7. Install quadrant sight (Figure 11, Item 2) on carrying handle (Figure 11, Item 4) of host weapon (Figure 11, Item 3) with knurled screw (Figure 11, Item 1) on right side of carry handle.
8. Tighten knurled screw (Figure 11, Item 1) clockwise until quadrant sight (Figure 11, Item 2) does not wiggle on carry handle (Figure 11, Item 4).

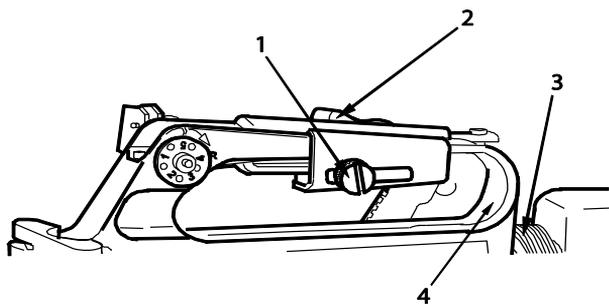
ASSEMBLY-CONTINUED

Figure 11. Quadrant Sight-Assembly.

END OF WORK PACKAGE

CHAPTER 6
AMMUNITION
FOR
LAUNCHER, GRENADE, 40-MM, M203
LAUNCHER, GRENADE, 40-MM, M203A1
LAUNCHER, GRENADE, 40-MM, M203A2

**AMMUNITION MARKING INFORMATION AUTHORIZED AMMUNITION,
TYPES OF AMMUNITION, CARE AND HANDLING**

WARNING



DO NOT fire ammunition not made for use in the M203 Grenade Launcher. This may result in injury or death to operator.



Hearing protection is required for the user and all adjacent personnel on firing range when using M585 cartridge.

NOTE

The following table lists the only ammunition authorized for use in the M203/M203A1 and M203A2 Grenade Launcher. Authorized ammunition is listed by color coding, classes, arming ranges, and special information when required. ALWAYS turn in non-firing ammunition to field maintenance for disposal.

Table 1. Authorized Ammunition for M203/M203A1/M203A2 Grenade Launcher.

Type	Identification
Training Practice Round (40-mm)	M781
Multiple Projectile Round (Buckshot)	M576
High Explosive (HE) (40-mm)	M406 M433
Pyrotechnic Signal and Spotting Rounds (40-mm)	M583 M585 M661 M662 M713 M715 M716 M992
Non-Lethal Cartridge (40-mm)	M1006 M1029

TYPES OF AMMUNITION

The only types of ammunition authorized for use in the M203/M320A1 and M203A2 Grenade Launcher are shown in this work package. The authorized types of ammunition are listed by their color coding, classes, arming ranges, and any required special information.

WARNING



Hearing protection is required for the user and all adjacent personnel within 3 m (10 ft) of weapon during training.

40-mm Ammunition Training Practice Rounds

WARNING



The danger radius of practice grenades is 20 m (66 ft).

The M781 practice round has an inert projectile; however, it does contain a propelling charge.

No DUMMY ammunition is supplied for this weapon.



Figure 1. M781 Training Practice Round.

TYPES OF AMMUNITION-CONTINUED**NOTE**

When firing M576 cartridge ensure to at foot of target. The multiple projectile round contains no mechanical-type fuse.



Figure 2. M576 Multiple Projectile Round (Buckshot).

40-mm Ammunition High Explosive (HE) Service**WARNING**

The danger radius of the High Explosive (HE) grenade is 165 m (541 ft). The M406 and M433 rounds arm within 14 to 27 m (46 to 89 ft).



Figure 3. High Explosive (HE) Ammunition. M406 on left, M433 on right.

40-mm Ammunition Pyrotechnic Signal and Spotting Rounds

Figure 4. Pyrotechnic Signal and Spotting Rounds. From left to right M583 White, M585 White, M661 Green, M662 Red, M992 Infrared



Figure 5. Pyrotechnic Signal and Spotting Rounds. From left to right M716, M715, M713

40-mm Non-Lethal Cartridges**WARNING**

Observe all operator instructions that are over-packed with M1006 cartridge. Failure to do so may result in injury to personnel or damage to equipment.



Figure 6. M1006 Non-Lethal Cartridge.

WARNING

Do not fire the M1029 Crowd Dispersal Cartridge at groups of individuals nearer than 10 meters. Engaging persons closer than this distance can cause lethal trauma to individuals being engaged.



Figure 7. M1029 Crowd Dispersal Cartridge.

END OF TASK

CARE AND HANDLING

Aluminum cases are easily dented and may be hard to chamber and extract. Use care in handling ammunition. Keep ammunition dry, clean, and free of grease, sand, mud, snow, and ice.

END OF TASK**END OF WORK PACKAGE**

CHAPTER 7
SUPPORTING INFORMATION
FOR
LAUNCHER, GRENADE, 40-MM, M203
LAUNCHER, GRENADE, 40-MM, M203A1
LAUNCHER, GRENADE, 40-MM, M203A2

REFERENCES

SCOPE

This work package lists all field manuals, forms, technical manuals, and miscellaneous publications referenced in this manual.

Pamphlets and Forms

AF TO Form 22 ... Technical Order System Publication Improvement Report and Reply
 AR 385-40 Accident Reporting and Records
 AR 75-1 Malfunctions involving Ammunition and Explosives
 DA PAM 750-8 The Army Maintenance Management System (TAMMS)
 DA PAM 738-751 Functional Users Manual for the Army Maintenance Management Systems-Aviation (TAMMS-A)
 DA Form 285 Army Abbreviated Ground Accident Report
 DA Form 2028 Recommended Changes to Publications and Blank Forms
 DA Form 2404 Equipment Inspection and Maintenance Worksheet
 MCO 4855.10 Product Quality Deficiency Report (PDQR)
 SF 364 Report of Discrepancy (ROD)
 SF 368 Product Quality Deficiency Report

FIELD MANUALS

AF 121-101 Maintenance Management of Aircraft
 AFMAN 44-163 First Aid
 FM 3-87 Nuclear, Biological, and Chemical (NBC) Reconnaissance and Decontamination Operations (How To Fight)
 FM 4-25.11 First Aid for Soldiers
 FM 21-40 NBC (Nuclear, Biological, and Chemical) Defense

MISCELLANEOUS PUBLICATIONS

AR700-138 Army Logistics Readiness and Sustainability
 CTA 8-100 Army Medical Department Expendable/Durable Items
 CTA 50-970 Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)
 NAVMC 10772 Recommended Changes to Publications/Logistics-Maintenance Data Coding

TECHNICAL MANUALS

TM 3-220 Chemical, Biological, and Radiological (CBR) Decontamination
 TM 750-244-7 Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090, and 1095 to Prevent Enemy Use
 TM 4700-15/1 Equipment Record Procedures
 TO 00-35D-54 Material Deficiency Reporting and Investigating System

END OF WORK PACKAGE

0013-1/BLANK

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

INTRODUCTION**Scope**

These work packages lists COEI and BII for the M203 Series Grenade Launchers to help you inventory items for safe and efficient operation of the equipment.

General

The COEI and BII Lists are divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the M203 Series Grenade Launchers. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the M203 Series Grenade Launchers in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the M203 Series Grenade Launchers during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the Table of Organization and Equipment/Modified Table of Organization and Equipment (TOE/MTOE). Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column (1) Illus Number. Gives you the number of the item illustrated.

Column (2) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) Description, Part Number/Commercial and Government Entity Code (CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the CAGEC (in parentheses) and the part number.

Column (4) Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment. These codes are identified below:

<u>Code</u>	<u>Used On</u>
401	M203 Grenade Launcher
BC7	M203A1 Grenade Launcher
BJ9	M203A2 Grenade Launcher

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS-(CONTINUED)

Column (5) U/I. Unit of Issue (U/I) indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) Qty Rqr. Indicates the quantity required.

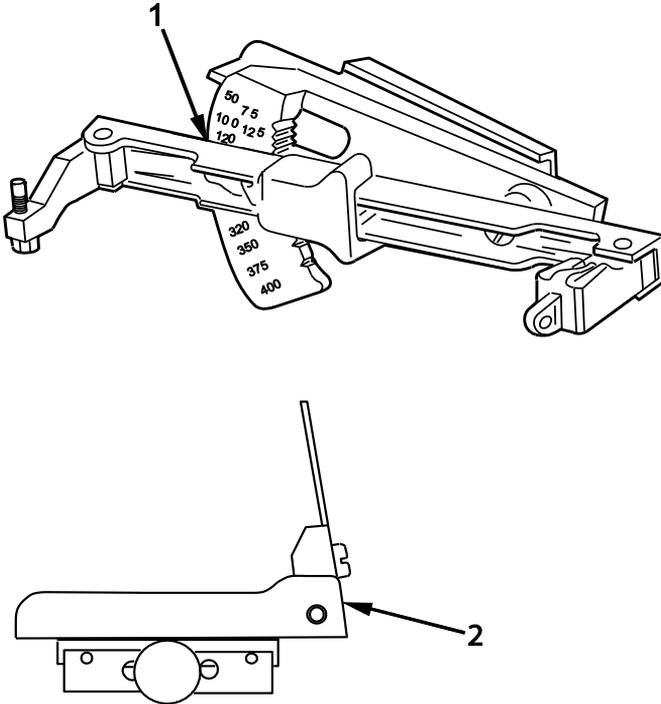


Table 1. COMPONENTS OF END ITEM LIST

(1) ILLUS NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) UOC	(5) U/I	(6) QTY RQR
1	1010-01-442-2313	SIGHT, RIFLE GRENADE LAUNCHER: Quadrant 12598114(19200)	401 BC7 BJ9	EA	1
2	1010-01-453-5387	SIGHT, LEAF AND RAILGRABBER 12598117(19200)	BJ9	EA	1

**COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII)
LISTS-(CONTINUED)**

1

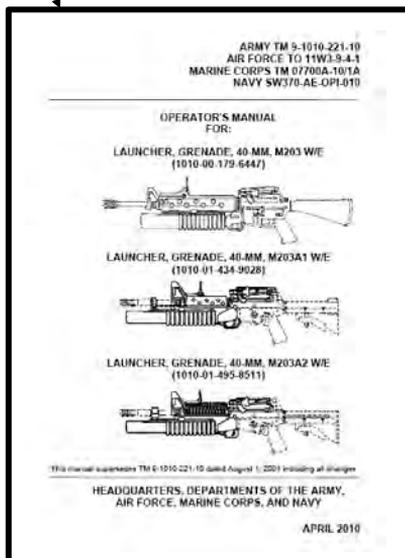


Table 2. BASIC ISSUE ITEM LIST

(1) ILLUS NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) UOC	(5) U/I	(6) QTY RQR
1		OPERATOR'S MANUAL FOR LAUNCHER, GRENADE 40- MM, TM 9-1010-221-10	401 BC7 BJ9	EA	1

END OF WORK PACKAGE

ADDITIONAL AUTHORIZED LISTS (AAL)

Scope

This work package lists additional items authorized to support the M203 Grenade Launchers.

General

This list identifies items that do not have to accompany the M203 Grenade Launchers and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

Explanation of Columns in the AAL

Column (1) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) Description, Part Number/(CAGEC). Identifies the Federal item name followed by a minimum description when needed. The last line below the description is the part number and the Commercial and Government Entity Code(CAGEC).

Column (3) Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment. These codes are identified below:

<u>Code</u>	<u>Used On</u>
401	M203 Grenade Launcher
BC7	M203A1 Grenade Launcher
BJ9	M203A2 Grenade Launcher

Column (4) U/I. Unit of Issue (U/I) indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (5) Qty Recm. Indicates the quantity recommended.

TABLE 1. ADDITIONAL AUTHORIZED ITEMS LIST

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, PART NUMBER AND CAGEC	(3) USABLE ON CODE	(4) U/I	(5) QTY RECM
1010-00-474-5466	BRUSH, BORE CLEANING 7790665(19204)	401 BC7	EA	1
1090-00-474-5465	THONG, BORE BRUSH, 7790631(19204)	BJ9	EA	1

END OF WORK PACKAGE

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LISTS

Scope

This work package lists expendable and durable items needed to operate and maintain the M203 Grenade Launchers. This list is for information only and does not authorize the requisitioning of the listed items. These items are authorized by CTA 50-970, Expendable/Durable Items (except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns in the Expendable/Durable Items List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0098, item 5)).

Column (2) Level. This column identifies the lowest level of maintenance required to work on the listed item. (C = Crew, O = AMC, F = Maintainer or ASB, H = Below Depot or TASMG, D = Depot).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) – Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC).

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.

(1) Item No.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
1	C	9150-01-102-1473	CLEANER, LUBRICANT, AND PRESERVATIVE (CLP) ½ oz bottle MIL-PRF-63460(81349)	OZ
2	C O O	6850-00-224-6656 6850-00-224-6657 6850-00-224-6663	CLEANING COMPOUND, RIFE BORE: small arms bore cleaning solution (RBC) 2-oz (59.15ml) bottle 8-oz (236.59-ml) can 1-gal. (3.79-1) can MIL-PRF-372(81349)	OZ OZ GL
3	O	9150-00-292-9689	LUBRICATING OIL, WEAPONS (LAW) 1-qt (0.95-1) can MIL-PRF-14107(81349)	QT
4	C C O O	9150-00-935-6597 9150-00-889-3522 9150-00-687-4241 9150-00-753-4686	LUBRICATING OIL, WEAPONS (LSA), semifluid 2-oz (59.15-ml) plastic bottle 4-oz (118.30-ml) bottle 1-qt (0.95-1) can 1-gal. (3.79-1) can MIL-PRF-46000(81349)	OZ OZ QT GL
5	C	7920-00-205-1711	RAG, WIPING, cotton 50 lb bundle (58536)	EA

END OF WORK PACKAGE

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	D	
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS						Use Part II (<i>reverse</i>) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE <i>Date you filled out this form.</i>
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PUBLICATION/FORM NUMBER <i>TM Number</i>						DATE <i>Date of the TM</i>	TITLE <i>Title of the TM</i>
ITEM	PAGE	PARA- GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
SAMPLE							
* Reference to line numbers within the paragraph or subparagraph.							
TYPED NAME, GRADE OR TITLE <i>Your Name</i>				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION <i>Your Phone Number</i>		SIGNATURE <i>Your Signature</i>	

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PUBLICATION NUMBER				DATE		TITLE		
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

SAMPLE

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 9-1010-221-10						DATE 31 October 2011	TITLE Operator's Manual for Launcher, Grenade, 40-MM
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
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						SIGNATURE	

TO: <i>(Forward direct to addressee listed in publication)</i> U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
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PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

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ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
* Reference to line numbers within the paragraph or subparagraph.							
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE	

TO: <i>(Forward direct to addressee listed in publication)</i> U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
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PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TM 9-1010-221-10	DATE 31 October 2011	TITLE Operator's Manual for Launcher, Grenade, 40-MM
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is GAASA						Use Part II (<i>reverse</i>) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
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RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
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